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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,765	05/12/2005	Dirk Kornelis Gerhardus De Boer	NL02 1146 US	8888

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PHILIPS ELECTRONICS NORTH AMERICA CORPORATION  
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EXAMINER

TRA, TUYEN Q

ART UNIT PAPER NUMBER

2873

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/534,765	DE BOER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tuyen Q. Tra	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new grounds of rejection.

### ***Specification Objections***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "8", on page 5, line 22, has been used to designate both electrode and dielectricum. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### **Arrangement of the Specification**

2. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.

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- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Kyu et al. (U.S. Pat. 6,815,016 B2).
- a) With respect to claim 1, Kyu et al. discloses a electrically tunable microlens array formed by pattern polymerization of photopolymerizable mixtures containing liquid crystals comprising of a body (Figure 1, item 100) comprising a polymerizable

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electro-optical material (i.e. a photopolymerizable liquid crystal, column 1, lines 11-16) operable for being brought into an optically anisotropic state in response to an electric field, the polymerizable electro-optical material in a non-uniform electric field to establish electric field lines in accordance with a desired pattern within the electro-optical material, the electric field lines for aligning the material and bringing the material into a desired optically anisotropic state commensurate with the non-uniform electric field, and the material in the optically anisotropic state providing the optically anisotropic body (by exposing light thru ITO electrodes to the material) (column 1, lines 45-65) .

b) With respect to claim 10, Kyu et al. disclose a electrically tunable microlens array formed by pattern polymerization of photopolymerizable mixtures containing liquid crystals comprising subjecting a polymerizable electro-optical material to a non-uniform electric field to establish electric field line in accordance with a desired pattern within the electro-optical material, the electric field lines being of sufficient strength for aligning the material and bringing the material into a desired optically anisotropic state commensurate with non-uniform electric field and polymerizing the material in the material in the anisotropic state to provide the optically anisotropic body (column 1, lines 45-65).

c) With respect to claims 2 and 11, Kyu et al. further discloses wherein the electro-optic material is a liquid crystal monomer (column 9, line 20).

d) With respect to claims 3 and 12, Kyu et al. further discloses wherein the body comprising the polymerizable material is provided on an alignment layer (column 4, line 24-27).

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f) With respect to claims 4 and 13, Kyu et al. further discloses wherein the non-uniform electric field is applied by use of a plurality of spaced electrodes (108).

g) With respect to claims 5 and 14, Kyu et al. further discloses wherein the non-uniform electric field is applied by use at least one structured electrode (108) pair.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6-8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kyu et al. (U.S. Pat. 6,815,016 B2), as applied to claim 1 above, in view of Van Der Wel et al. (WO 03/062912 A1).

With respect to claims 6-8 and 15, Kyu et al. discloses a process for producing a patterned anisotropic polymeric film comprising comprising of a body (Figure 1, item 100) comprising a polymerizable electro-optical material (i.e. a photopolymerizable liquid crystal, column 1, lines 11-16) operable for being brought into an optically anisotropic state in response to an electric field, the polymerizable electro-optical material in a non-uniform electric field to establish electric field lines in accordance with a desired pattern within the electro-optical material, the electric field lines for aligning the material and bringing the material into a desired optically anisotropic state commensurate with the non-uniform electric field, and the material in the optically

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anisotropic state providing the optically anisotropic body (by exposing light thru ITO electrodes to the material) (column 1, lines 45-65). However, Kyu et al. do not disclose wherein non-uniform electric field is applied by use of a plurality of spaced electrodes arranged at one side of the body; and electrode(s) is part of the body. Within the same field of endeavor, Van Der Wel et al. discloses a display device with teaching a non-uniform electric field is applied by use of a plurality of spaced electrodes (7) arranged at one side of the body (i.e. top side of the body); wherein the electrode (6) is part of the body (see Figure 1).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the polymerizable electro-optical apparatus with electrodes for generating electric field such as disclosed by Kyu et al., with an electric field is applied by use of a plurality of spaced electrodes arranged at one side of the body; wherein the electrode (6) is part of the body such as discloses by Van Der Wel et al., for purpose of generating electric field for changing characteristics of the material.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kyu et al. (U.S. Pat. 6,815,016 B2), as applied to claim 1 above, in view of Kumar et al. (US Patent 6,864,931 B1).

With respect to claim 9, Kyu et al. discloses a process for producing a patterned anisotropic polymeric film comprising a polymerizable electro-optical material (i.e. a photopolymerizable liquid crystal) operable for being brought into an optically anisotropic state in response to an electric field (col. 4, line 35), subjecting the

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polymerizable electro-optical material to a non-uniform electric field to establish electric field lines in accordance with a desired pattern within the electro-optical material, the electric field lines being of sufficient strength for aligning the material and bringing the material into a desired optically anisotropic state commensurate with the non-uniform electric field, and polymerising the material in the optically anisotropic state to provide the optically anisotropic body (by exposing light thru ITO electrodes to the material)(col.4, line 15 - col. 6, line 22). However, Kyu et al. does not disclose the anisotropic body is selected from the group consisting of a polariser, a compensation foil, and a micro-lens array. Kumar et al. disclose an electrically controllable liquid crystal microstructures in Figure 10 with the body is a microlens array (item 80, Figure 10).

It would have been obvious, therefore, at the time the invention was made to a person having skill in the art to construct the polymerizable electro-optical apparatus with an optically anisotropic body such as disclosed by Kyu et al., with the body is microlens array such as discloses by Kumar et al., for purpose of focusing light on display device.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen Q. Tra whose telephone number is 571-272-2343. The examiner can normally be reached on 9:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L. Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT

January 18, 2007

  
RICKY MACK  
SUPERVISORY PATENT EXAMINER